9/870235

Refine Search

Search Results -

Terms	Documents
6850209.pn.	1

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L78

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Friday, May 27, 2005 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
L78	6850209.pn.	1	L78
L77	L75 and (ieee$ with 802$)	4	L77
L76	L75 and ieee$	6	L76
L75	L73 and (rent$ or charg$ or fee)	17	L75
L74	L73 and (rent$ with (charg$ or fee))	0	L74
L73	L72 and ((rent$ or leas$) with (vehicle or automobile or car))	23	L73
L72	L71 and (vehicle with (condition$ or gas or mileage or accident))	27	L72
L71	L70 and (transmit$ with radio$)	402	L71
L70	bluetooth and @ad<=20010530	1116	L70
L69	L68 and (security with level$ with transaction)	2	L69
L68	5613012.pn. or 6745936.pn.	2	L68
	DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
	(access$ and security and random) and ((rating) with security$ with risk$) and		

L67	@ad<=20011012	6	L67
L66	L64 and (flight and airport)	3	L66
L65	L64 and (flight or airport)	11	L65
L64	L62 and (security with risk$)	68	L64
L63	L62and (security with risk$)	5226	L63
L62	(access$ and security and random) and ((rank$ or grad$ or rating) with security$) and @ad<=20011012	238	L62
L61	L48 and ((rank$ or grad$ or rating) with security$)	0	L61
L60	L48 and ((rank$ or grad$ or rating) with generat$)	10	L60
L59	L50 and ((rank$ or grad$ or rating) with generat$)	0	L59
L58	L50 and (rating with generat$)	0	L58
L57	L56 and (security with risk$)	1	L57
L56	L50 and (rat$ with generat$)	25	L56
L55	L54 and (random$ with (code or number))	14	L55
L54	l52 not L53	14	L54
L53	L52 and (flight and airport)	4	L53
L52	L51 and (verif$ with ident$)	18	L52
L51	L50 and (random$ with (code or number$))	52	L51
L50	L48 and check$ and verif$	102	L50
L49	L48 and checl$ and verif$	0	L49
L48	RFID and (access$ and security and random) and @ad<=20011012	248	L48
L47	L46 and random$	7	L47
L46	L45 and check$	13	L46
L45	L44 and (flight$ or airport)	14	L45
L44	L43 and @ad<=20011012	68	L44
L43	RFID and (access$ with gate$) and security	185	L43
	DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
L42	l40 and (train$ or locomotive) and (wheel$ same (correct$ with (factor or coefficient)))	0	L42
	DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
L41	(3604905 | 3334224 | 3383677 | 3392448 | 3731088 | 3845289 | 3364343 | 3890616 | 2990902 | 3440600 | 3772640 | 3268727 | 3836768 | 3219815 | 3681752 | 3717873 | 3240929 | 3188631 | 3725918 | 3749893 | 3250914 | 3538313 | 3079494 | 3789198 | 3715572)![PN]	25	L41
L40	('3971018'| '4066877'| '4023753'| '3953714'| '4084241'| '3976272')[PN]	6	L40
L39	(4023753 | 4084241 | 4066877 | 3976272 | 3971018 | 3953714)![PN]	6	L39
L38	('4179739')[PN]	1	L38
L37	L29 and (train$ or locomotive) and (wheel$ same (correct$ with (factor or coefficient)))	1	L37
L36	L35 and (train$ or locomotive) and (wheel$ same (correct$ with (factor or coefficient)))	0	L36
L35	L31 and @ad<=20031126	108	L35
	('5390880'| '6141607'| '5437422'| '5828979'| '6459964'| '5798949'| '6662141'|		

L34	'6304801'| '6873962'| '5440489'| '4266273'| '4752053'| '4617627'| '5239472'| '5006847')[URPN]	108	L34
L33	('4179739')[URPN]	15	L33
L32	L29 and (train$ or locomotive) and (wheel$ same (correct$ with (factor or coefficient)))	1	L32
L31	('6775690'| '6860423'| '6697811'| '6839753'| '6790198'| '6459964'| '6662141'| '6304801'| '6873962'| '6802003'| '4752053'| '5390880'| '6141607'| '5239472'| '5437422'| '5828979'| '5006847'| '5798949'| '4617627'| '5440489'| '4266273')[URPN]	108	L31
L30	('6408330'| '4179739')[URPN]	21	L30
L29	4179739.pn.	1	L29
L28	L27	1	L28

DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR

L27	L26 and access$ and security	1	L27
L26	L17 and "iclass"	15	L26
L25	L24 and "iclass"	0	L25
L24	L23 and security	21	L24
L23	L17 not l19	49	L23
L22	l20 not L21	5	L22
L21	L20 and gate and security	2	L21
L20	L19 and access$	7	L20
L19	L18 and smart$	7	L19
L18	L17 and hid$	33	L18
L17	card and iclass$	56	L17
L16	card and "iclass16k.cg"	0	L16
L15	hID and "iclass16k.cg"	0	L15

DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR

L14	L13 and check$	11	L14
L13	L12 and (airport or flight)	11	L13
L12	L11 and (random$ near2 (code or number))	45	L12
L11	L10 and (password or "pass-word")	179	L11
L10	L9 and (remote$ with access$)	263	L10
L9	L8 and (computer$ with access$)	713	L9
L8	safeguard and security	2048	L8
L7	L6 and ((correct$ or edit$ or chang$) with (coefficient or factor))	0	L7
L6	L5 and gps	1	L6
L5	4179739.urpn.	15	L5
L4	('4179739')[URPN]	15	L4
L3	4179739.pn.	1	L3
L2	4179739.pn. and (gps)	0	L2
L1	4179739.pn. and ((correct$ or edit$ or chang$) with (coefficient or factor))	1	L1

L77: Entry 4 of 4 File: USPT May 11, 2004

DOCUMENT-IDENTIFIER: US 6735630 B1
TITLE: Method for collecting data using compact internetworked wireless integrated network sensors (WINS)

Application Filing Date (1):
20001004

Brief Summary Text (8):
The DARPA sponsored a second program involving both UCLA and the Rockwell Science Center called Adaptive Wireless Arrays for Interactive Reconnaissance, surveillance and target acquisition in Small unit operations (AWAIRS), whose genesis was in 1995. Its focus has been upon the development of algorithms for self-assembly of the network and energy efficient routing without the need for masters, cooperative signal processing including beamforming and data fusion across nodes, distributed self-location of nodes, and development of supporting hardware. A self-assembling network has been demonstrated. Moreover, the AWAIRS program includes notions such as layered signal processing of signals (including use of multiple processors within nodes, as in LWIM), and data aggregation to allow scaling of the network. A symposium was held in 1998 to discuss the implications of such sensor networks for a wide variety of applications, including military, health care, scientific exploration, and consumer applications. The AWAIRS nodes have also been used in condition based maintenance applications, and have a modular design for enabling various sensor, processing, and radio boards to be swapped in and out. There is now a confirmed set of WINS applications within the Department of Defense for battlefield surveillance and condition based maintenance on land, sea and air vehicles, and WINS technology is being considered as a primary land mine replacement technology. See: J. R. Agre, L. P. Clare, G. J. Pottie, N. P. Romanov, "Development Platform for Self-Organizing Wireless Sensor Networks," Aerosense '99, Orlando, Fla., 1999; K. Sohrabi, J. Gao, V. Ailawadhi, G. Pottie, "A Self-Organizing Sensor Network," Proc. 37th Allerton Conf. on Comm., Control, and Computing, Monticello, Ill., September 1999; University of California Los Angeles Electrical Engineering Department Annual Research Symposium, 1998; K. Yao, R. E. Hudson, C. W. Reed, D. Chen, F. Lorenzelli, "Blind Beamforming on a Randomly Distributed Sensor Array System," IEEE J. Select. Areas in Comm., vol. 16, no. 8. October 1998, pp.1555-1567.

Detailed Description Text (4):
WINS NG is a fundamental advance for network access to densely and is deeply distributed sensing, control, and processing systems. Applications for WINS NG extend from a local scale to a global scale. For example, on a local, wide-area scale, battlefield situational awareness provides personnel health monitoring and enhances security and efficiency. On a local, enterprise scale, WINS NG creates a manufacturing information service for cost and quality control. On a local machine scale, WINS NG condition-based maintenance devices equip power plants, appliances, vehicles, and energy systems with enhanced reliability, reductions in energy usage, and improvements in quality of service. On a national scale, transportation systems, and borders can be monitored for efficiency, safety, and security. Also, on a metropolitan scale, new traffic, security, emergency, and disaster recovery

services are enabled by WINS NG. In the biomedical area, WINS NG connects patients in the clinic, ambulatory outpatient services, and medical professionals to sensing, monitoring, and control. On a global scale, WINS NG permits environmental monitoring of land, water, and air resources. It is, thus, fundamentally a technology that efficiently links networks to the physical world.

Detailed Description Text (42):
k. BOOL INITIALIZE_WINS_RF_MODEM: Initializes RF modem operation and sets RF modem configuration. Member variables and functions include: Addressing mode selection (Unicast or Broadcast), Packet retransmission attempt count, Master or Slave mode selection, and RF Section Enable. Packet retransmission attempt count is the number of automatic retransmission attempts in the event of packet errors. In the Master operating mode, the node controls the frequency hopping pattern for all participating nodes within reception range. In the Slave mode, the node acquires and follows the hopping pattern of a Master. Radio frequency Section Enable allows control of receive and transmit RF sections. This is useful for power management of communication functions.

Detailed Description Text (60):
The processor can be any of a number of commercial platforms, such as the Uniden PC-100 or equivalent. It is supplemented by random access memory (RAM) and read-only memory (ROM). In one embodiment, the processor system also includes a serial RS-232 port. Compact Flash Slot, user interfaces in the form of Display, Touch Screen, Microphone, Audio Output, and employs as its Operating System Windows CE 2.0. If the node is to serve as a gateway, it can include a gateway Ethernet interface, using for example a compact flash card Ethernet network interface adapter, supporting NE2000 Compatible 10baseT Ethernet Interface (IEEE 802.3), using twisted pair cables, a standard RJ-45 8-pin female connector, and interfacing to the Compact Flash slot at the WINS NG processor.

Detailed Description Text (66):
A WINS NG node can include a radio frequency (RF) modem. In an embodiment, the RF modem includes a frequency hopped spread spectrum system operating in the unlicensed 2.4 GHz industrial, scientific and medical (ISM) band. Specifications for this RF modem include Binary Frequency Shift Keying (BFSK) modulation, frequency hopping among 50 channels. and programmable addressing of 6 byte IEEE 802.3 addresses. The modem operates in a master/slave hierarchy where the master modem provides synchronization for many slave modems. By default, the gateway modem may function as a master. However, this is not required nor always optimal. The master/slave hierarchy can be exploited for design of multihop networks, as described herein, using the ability to promote a modem from a slave to a master state or demote it from a master to a slave state.

Detailed Description Text (270):
Echoes are a significant problem with telephone wire, due to impedance mismatches on each end. However, since bandwidth is not at a premium in sensor networks that perform significant signal processing at source, this may be simply handled by using time division duplex transmission. The same approach is used for radio transmission since radios are unable to transmit and receive at the same time on the same frequency.

Detailed Description Text (279):
The WINS technology of an embodiment also supports the coexistence of heterogeneous communications devices. In wireless channels, the multiple access nature makes coexistence of radios with very different transmit power levels and transmission speeds difficult. This is made more complicated by the likelihood of there being no central controller for channel access, making policing of the access channels more difficult. One method is to make available universally understood control channels for negotiation of connections between different users. These users will then ordinarily switch to other channels according to the highest common denominator of

their capabilities. These channels can also be used for scheduling of persistent channel access, or to set up a multi-cast group. However, it is generally anticipated that users will not grab these channels for data transport. To enforce this, the protocol times out users or otherwise enforces transmission duty cycle limits through built-in programming operating in each node.

Detailed Description Text (280):
In addressing the problem of defining an access scheme that is robust with respect to interference from users who may not be conforming to the protocol, a WINS embodiment uses a combination of spread spectrum communications and channel coding. As a side benefit, this also provides some diversity. More sophisticated users can attempt transmission at multiple power levels (gradually increasing to avoid excessive interference), but this is not required of all users. The rapid acquisition of the appropriate code phase is assisted by a gateway in charge that can transmit a beacon which carries the access channel phase to everyone within range. Alternatively, absent a gateway, a number of pre-selected channels can be used for exchange of synchronism messages among active users. New users eavesdrop on these channels and then gain admission having learned the correct local phase.

Detailed Description Text (341):
The WINS network of an embodiment provides desired monitoring functions and also manages the capital equipment assets, by performing a continuous inventory of the equipment. This WINS network system includes: the ability to monitor the condition of machinery, equipment, instruments, vehicles, and other assets as well as monitoring the equipment location; the ability to monitor the condition of machinery, equipment, instruments, vehicles, and other assets as well as monitoring the inventory of components on these systems thereby making it possible to determine that the components have originated at a specific supplier and have been installed at a particular time; a WINS network with systems for electronically marking and verifying the presence of components; a WINS network having systems for notifying a remote user when components are installed on a system that do not meet specifications or do not contain the electronic marking; a WINS network that uniquely identifies components that contain a mechanical feature that generates a unique and identifiable vibration pattern; a WINS network that uniquely identifies components by detecting an electromagnetic signal generated by the rotation of the component; a WINS network that derives energy for powering the network from an electromagnetic signal; a WINS network that derives energy for powering the network from unique mechanical fixtures located on moving equipment; a WINS network that enables the operation of equipment when positive identification of components is made and disables the equipment according to a specified protocol when unidentified components are present; a WINS network that enables the operation of equipment when it is located in a specified location or set of locations, disables the equipment when it is located in a specified location or set of locations, and disables the equipment according to a specified protocol when the equipment is removed; a WINS network that enables the operation of equipment when a specified service is performed and disables the equipment according to a specified protocol when the service has not been performed as per a specified protocol; a WINS network that enables the operation of equipment when certain remote signals or messages are received and disables the equipment according to a specified protocol when the signals or messages have not been received; a WINS network that measures, records, and communicates operating parameters that are associated with safe or unsafe operation of equipment or safe or unsafe actions by operators; a WINS network that combines any set of combination of the above capabilities; and a WINS network that combines any set or combination of the above capabilities and is remotely configurable in its protocols that determine the response to any set of conditions.

Detailed Description Text (344):
Home applications of the WINS technology include security networks, health monitoring, maintenance, entertainment system management, vehicle communications,

control of appliances, computer networks, location and monitoring of children and pets, and energy and climate management. The self-assembly features, compact size, and efficient energy usage of WINS NG and PicoWINS networks enable low-cost retrofitting for this full range of applications. The modular design of the nodes enables configurations that can interoperate with emerging consumer radio network standards such as Bluetooth or Home RF. Higher-speed protocols such as Bluetooth can be used to multihop information throughout a residence and/or to a vehicle, while lower speed and less costly solutions are adopted for a dense security network. Nodes with higher speed radios can be coupled to a reliable power supply. The WINS NG server and web assistant technology make possible the remote monitoring and control of these systems with standard tools, including archiving of important data and provision of warnings to the current registered communications mode of the users (e.g., pager).

Detailed Description Text (358):
Inherent to any AMR technology is a communications link. Current AMR solutions utilize telephone dial-up, power lines, and low power RF technology in the 928-956 MHz band. Cellular, Personal Communication System (PCS), or specialized mobile radio (SMR) airlinks are more flexible than dial-up or power line links, and they cover a broader geographic area than the 928-956 MHz signals. Despite these comparative advantages, wireless communications carriers will not capture a meaningful share of the AMR market unless they quickly develop and distribute an AMR solution. Present solutions either demand installation of costly new infrastructure or payment of high subscription fees to make use of existing wireless infrastructure.

Detailed Description Text (369):
The WINS NG technology provides low cost, low power, compact intelligent nodes that are coupled to vehicle diagnostic ports. The WINS NG node can for example communicate via the Federal Communications Commission (FCC) ISM-band spread spectrum channels. These channels, in addition to providing robust communication, are unlicensed, thus eliminating wireless access subscription fees. Power limitations prevent wide area coverage, and so communication over such channels may optionally be supplemented by lower speed access over licensed channels. The WINS NG nodes link to local area WINS NG bi-directional gateways that access Internet services via multiple channels. The WINS NG node manages the vehicle access port, logs and processes vehicle information, finds the lowest cost Internet connection permitted by application latency constraints, and immediately enables a wide range of valuable services at small incremental cost. Thus, for example, a node may process diagnostic port data and transmit a reduced data set to a server if only cellular communications are available during a time window or, application permitting, queue the data until an available WINS NG gateway connection comes into range.

Detailed Description Text (371):
Other WINS NG system benefits apply to vehicle manufacturer fleet customers who can track, locate, monitor, secure and control vehicles in rental and other operations while reducing personnel costs. Access to vehicle manufacturer customers through the life cycle results from personalized, web-based information services. These services include vehicle owner automated help-desk businesses that bring value to a customer and provide information via conventional mail or world wide web-based commerce solutions. The WINS NG vehicle internetworking also provides marketing and business information such as sales information and vehicle usage data that may be used in, for example, formulating targeted advertising.

Detailed Description Text (377):
Users benefit from a node that is continuously active with both monitoring and recording of vehicle condition. Data downloads to a vehicle, such as software updates, are beneficial. Preferably, a node falls within the proximity of a gateway for a download, but is not required to be immediately adjacent to a gateway.

CLAIMS:

12. The method of claim 1, further comprising coupling the sensor node to at least one of machinery components, electronic equipment, mechanical equipment, electro-mechanical equipment, a facility, a structure, a material, a biological system, people, animals, vegetation, clothing, crates, packages, product containers, shipping containers, a transportation system, vehicle components, an outdoor area, and an indoor area.

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☐ 1. Document ID: US 6859831 B1

L75: Entry 1 of 17 File: USPT Feb 22, 2005

US-PAT-NO: 6859831
DOCUMENT-IDENTIFIER: US 6859831 B1

TITLE: Method and apparatus for internetworked wireless integrated network sensor (WINS) nodes

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 2. Document ID: US 6850209 B2

L75: Entry 2 of 17 File: USPT Feb 1, 2005

US-PAT-NO: 6850209
DOCUMENT-IDENTIFIER: US 6850209 B2

TITLE: Apparatuses, methods, and computer programs for displaying information on vehicles

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 3. Document ID: US 6832251 B1

L75: Entry 3 of 17 File: USPT Dec 14, 2004

US-PAT-NO: 6832251
DOCUMENT-IDENTIFIER: US 6832251 B1

TITLE: Method and apparatus for distributed signal processing among internetworked wireless integrated network sensors (WINS)

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 4. Document ID: US 6826607 B1

L75: Entry 4 of 17 File: USPT Nov 30, 2004

US-PAT-NO: 6826607
DOCUMENT-IDENTIFIER: US 6826607 B1

TITLE: Apparatus for internetworked hybrid wireless integrated network sensors (WINS)

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

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☐ 5. Document ID: US 6812942 B2

L75: Entry 5 of 17 File: USPT Nov 2, 2004

US-PAT-NO: 6812942
DOCUMENT-IDENTIFIER: US 6812942 B2

TITLE: Context-responsive in-vehicle display system

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

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☐ 6. Document ID: US 6812851 B1

L75: Entry 6 of 17 File: USPT Nov 2, 2004

US-PAT-NO: 6812851
DOCUMENT-IDENTIFIER: US 6812851 B1

TITLE: Apparatuses for displaying information on vehicles

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

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☐ 7. Document ID: US 6748797 B2

L75: Entry 7 of 17 File: USPT Jun 15, 2004

US-PAT-NO: 6748797
DOCUMENT-IDENTIFIER: US 6748797 B2

TITLE: Method and apparatus for monitoring tires

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

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☐ 8. Document ID: US 6735630 B1

L75: Entry 8 of 17 File: USPT May 11, 2004

US-PAT-NO: 6735630
DOCUMENT-IDENTIFIER: US 6735630 B1

TITLE: Method for collecting data using compact internetworked wireless integrated network sensors (WINS)

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

☐ 9. Document ID: US 6701161 B1

L75: Entry 9 of 17 File: USPT Mar 2, 2004

US-PAT-NO: 6701161
DOCUMENT-IDENTIFIER: US 6701161 B1
** See image for Certificate of Correction **

TITLE: Multimedia unit

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 10. Document ID: US 6690268 B2

L75: Entry 10 of 17 File: USPT Feb 10, 2004

US-PAT-NO: 6690268
DOCUMENT-IDENTIFIER: US 6690268 B2

TITLE: Video mirror systems incorporating an accessory module

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

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Terms	Documents
L73 and (rent$ or charg$ or fee)	17

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☐ 11. Document ID: US 6647270 B1

L75: Entry 11 of 17 File: USPT Nov 11, 2003

US-PAT-NO: 6647270
DOCUMENT-IDENTIFIER: US 6647270 B1
** See image for Certificate of Correction **

TITLE: Vehicletalk

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

☐ 12. Document ID: US 6490443 B1

L75: Entry 12 of 17 File: USPT Dec 3, 2002

US-PAT-NO: 6490443
DOCUMENT-IDENTIFIER: US 6490443 B1
** See image for Certificate of Correction **

TITLE: Communication and proximity authorization systems

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

☐ 13. Document ID: US 6445287 B1

L75: Entry 13 of 17 File: USPT Sep 3, 2002

US-PAT-NO: 6445287
DOCUMENT-IDENTIFIER: US 6445287 B1

TITLE: Tire inflation assistance monitoring system

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

☐ 14. Document ID: US 6420975 B1

L75: Entry 14 of 17 File: USPT Jul 16, 2002

US-PAT-NO: 6420975
DOCUMENT-IDENTIFIER: US 6420975 B1

TITLE: Interior rearview mirror sound processing system

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

☐ 15. Document ID: US 6405132 B1

L75: Entry 15 of 17 File: USPT Jun 11, 2002

US-PAT-NO: 6405132
DOCUMENT-IDENTIFIER: US 6405132 B1
** See image for Certificate of Correction **

TITLE: Accident avoidance system

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

☐ 16. Document ID: US 6326613 B1

L75: Entry 16 of 17 File: USPT Dec 4, 2001

US-PAT-NO: 6326613
DOCUMENT-IDENTIFIER: US 6326613 B1

TITLE: Vehicle interior mirror assembly adapted for containing a rain sensor

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

☐ 17. Document ID: US 6294989 B1

L75: Entry 17 of 17 File: USPT Sep 25, 2001

US-PAT-NO: 6294989
DOCUMENT-IDENTIFIER: US 6294989 B1
** See image for Certificate of Correction **

TITLE: Tire inflation assistance monitoring system

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
L73 and (rent$ or charg$ or fee)	17

Display Format: TI Change Format

core

L75: Entry 2 of 17 File: USPT Feb 1, 2005

DOCUMENT-IDENTIFIER: US 6850209 B2
TITLE: Apparatuses, methods, and computer programs for displaying information on vehicles

Abstract Text (1):
A system for publicly displaying messages includes elements carried by an automotive vehicle. In some embodiments the vehicle carries a publicly visible electronic display; a sensor for sensing the brightness of light in the vicinity of the display; and illumination varying circuitry for varying the brightness of light generated by the display in response to brightness detected by the sensor. In some embodiments the vehicles carries a publicly visible display formed by ganging together a plurality of displays, each having at least 640.times.480 pixels; and video drive circuitry for causing images to be shown on the ganged display with different portions of individual images being shown on each of the individual displays. In some embodiments the vehicle has an automotive electrical system and carries a publicly visible high-bright display, capable of providing over 1000 NITS illumination and having 640 by 480 or greater pixel resolution; and video drive circuitry causing images to be shown on the display. In some embodiments the vehicle carries a publicly visible electronic display and a computer. The computer has video drive circuitry for causing images to be shown on the display, a memory device capable of storing representations of animated display images represented in vector-based form; and programming for enabling the computer to generate animated images from the vector-based animation representations. In some embodiments the vehicle receives commands and/or information controlling what it is to display via a wireless transceiver.

Application Filing Date (1):
20001229

Brief Summary Text (11):
In some embodiments the vehicle carries at least two of the publicly visible displays, and each display has an associated light sensor and illumination varying circuitry for varying the generated brightness of each display in response to the brightness detected by its associated light sensor. In some such multiple-display embodiments each displays is lit both by light incident upon display and by light generated by display under control of the illumination varying circuitry. Examples of such displays include transreflective displays, which can pass either generated or reflected light through a display's light valve to brighten its image, as well as displays that generate an images by spatially varying reflective shade or color, which can be light by either ambient or generated light. The illumination generated for each display can be controlled as a function of the amount of light falling on its associated light sensor, either dependently or independently of the amount of light generated for other displays and/or the amount of light falling on other the sensors associated with the position of other displays.

Brief Summary Text (12):
According to another aspect of the invention a system for publicly displaying messages comprises an automotive vehicle carrying the following elements: a publicly visible display formed by ganging together a plurality of individual electronic displays, each having at least a resolution of 640.times.480 pixels; and

video drive circuitry for generating signals to cause images to be shown on the ganged display, with different portions of individual images being shown on each of the individual displays.

Brief Summary Text (27):
According to one aspect of the invention a rooftop unit, for being carried on the roof of an automotive vehicle is provided. The rooftop unit includes an electronic display having at least 640.times.480 pixel resolution; a computer, having a video interface, for controlling the images shown on the display; and an electrical connection for receiving power from the electrical system of the vehicle.

Brief Summary Text (30):
In some rooftop units include an enclosure in which the display and computer are enclosed and mountings for suspending the enclosure in a position spaced above the roof of the vehicle. These mounting includes vibration isolators, for at least partially isolating the enclosure from vibration of the vehicle roof.

Brief Summary Text (42):
According to another aspect of the invention a rooftop unit for being carried on the roof of an automotive vehicle is provided. The rooftop unit includes an electronic display; display drive circuitry for driving images on the display; an enclosure in which the display and drive circuitry are enclosed; one or more roof protectors having a total of over two square feet of weight distributing surface shaped to fit the three dimensional curved surface of the roof of a vehicle on which the rooftop unit it is to be mounted; and a plurality of mountings supported by the one or more roof protectors for suspending the enclosure in a position spaced above the roof, which mounting includes vibration isolators, for at least partially isolating the enclosure from vibration of the vehicle roof.

Brief Summary Text (46):
In some embodiments of this aspect of the system includes a plurality of such mobile systems, each including one of the automotive vehicles carrying at least the display, the computer, and the radio. The system further including a central system which has one or more computer systems and one or more radios connected to the central system computers to enable them to wirelessly communicate with the computers on the mobile systems through the radios on those mobile systems. The computers of the central system include programming for causing the central system to communicate data to the mobile systems controlling what messages are displayed on the mobile systems; and programming for enabling the computers of the central system to obtain remote access of one or more the computers on the mobile systems.

Brief Summary Text (47):
According to another aspect of the invention a system for publicly displaying messages is provided which comprises an automotive vehicle carrying to following elements: a publicly visible electronic display; a computer, having a video interface, for controlling the images shown on the display; and a radio for conveying to and from the computer digital information, including information about which messages it should cause to be shown on the display, and for transmitting to remote computers information supplied to it by the vehicle's computer. The vehicle's computer includes programming enabling it to communicate, over the radio, to a remote computer information about the status of the computer.

Brief Summary Text (67):
According to one aspect of the invention a method of displaying messages is provided which includes: carrying a least two publicly visible electronic display at different positions on a moving vehicle, each of which is visible from a different external position relative to the vehicle. The method includes selecting different messages for each of the two different displays as a function of differences between viewers who are likely to see the different displays because of their different position with respect to the vehicle.

Drawing Description Text (49):
FIG. 63 is a schematic representation of an aspect of the invention which involves associating different values with the display of messages at different locations and times and calculating a sum of such values corresponding to the locations and times through which one or more vehicles has traveled and using such a sum to charge an advertiser or credit a vehicle operator;

Detailed Description Text (10):
The central system shown in FIG. 1 further includes a wireless system 134 for transmitting and receiving wireless messages to and from individual mobile units. The wireless system includes both a transmitter 136 and a receiver 138. As will be understood by those skilled in the arts of radio-frequency communication, in many embodiments of the invention, the transmitter and receiver of a wireless system will commonly share many components. The wireless system 134 can be any sort of wireless transmitter currently known or hereinafter invented. In many embodiments of the invention, however, the wireless system 134 will be a cellular phone or a wireless data communication system. In such embodiments, many of the components of the wireless system will be part of wireless systems provided by one or more third party phone companies.

Detailed Description Text (62):
The mobile unit shown in FIG. 20 further includes a local communication device 382 that is capable of communicating directly with local communication devices of the same type that are relatively close to the mobile unit. The local communication device 382 can be any type of communication device capable of performing such communication. This includes infrared communication devices, and various radio-frequency wireless communication devices, such as communication devices complying with the Bluetooth communications standard.

Detailed Description Text (74):
The passenger interface 400 can be used for different purposes. It can be used to enable passengers to surf the Internet, and or send and receive e-mail. It can also be used to provide the passenger with paid audio and visual programming, or with audio and visual programming paid for by advertising. In many embodiments providing the passenger with paid audio and video programming, the mobile unit's controller 140 includes programming 410 which keeps track of the passengers usage of the passenger interface and charges him accordingly. The amount of this charge can be added to the taxi fare calculated for the passengers' trip. The amount of the taxi fare and any charges for the use of the passenger interface can be displayed on the driver interface display 386 as well as on the passengers' display 402.

Detailed Description Text (75):
In some embodiments of the mobile unit, shown in FIG. 21, advertising messages are shown on the passenger display 402 and/or sounded on the passenger speaker 404. In such case the content of such messages can be selected by the system in response to conditions such as the location of the mobile vehicle, the destination of the passenger in the mobile vehicle, the time of day, day of the week, or date of the month, and other factors, such as information which the passenger has entered on the passenger interface 400. Such message selection can be performed by software 412 contained in the mobile unit's controller 130, or computers of the central system can select it.

Detailed Description Text (132):
This step enables a user to estimate the likely cost for a geosynchron based on the amount of display time it is likely to have, based on past history. As described above, in the embodiment being described, users are charged based on the amount of display time for their messages within a given geosynchron. In this embodiment, users are able to place in upper limit on the amount of display time they're willing to pay for within a given geosynchron. It should be understood that many

other schemes can be used to pay for displays in a geosynchron, given the fact that the amount of time spent in that geosynchron is usually not known in advance and can very widely.

Detailed Description Text (163):
As indicated by numeral 703, the programming of FIG. 29 also provides an interface for billing the user for a personal message, such as by charging the cost of the message to a credit card.

Detailed Description Text (199):
As indicated by step 818, the programming on the central system can use visual recognition software to estimate the number of people in the vicinity of the given display and record them as audience estimates for the geosynchrons corresponding to the locations and times at which the pictures are taken. Such information can be used to help advertisers estimate which are desirable locations to advertising given times, and can be used by the system to help determine the prices which are to be charged for various geosynchrons. In addition such statistics can be supplied to advertisers to let them see what the actual audiences were for the display of their advertisements in various geosynchrons.

Detailed Description Text (200):
As indicated by step 820, if visual recognition has not be performed by the display unit uploading image information, the central system can use visual recognition programming or hardware to estimate the number of vehicles, the speed of vehicles, and other traffic conditions at a given time and place, and record them in the central system's traffic database. Of course, visual images of the traffic themselves can also be stored in the traffic database. This database enables the drivers of the system's mobile units to find more effective routes at various times and places, and provides valuable media content, which can be sold by the central system, which can be used to attract audiences to its website, or which can be displayed on the outdoor displays of the system.

Detailed Description Text (202):
As indicated by steps 823 through 838, the programming of the central system can use visual recognition to vary the messages shown by its mobile units'displays based on different conditions determined from images derived from the systems' cameras, including: estimations of the number people who can see the display; estimations of the speed of vehicle or nearby vehicles; estimations of the age, sex, race, social class of people around the display; estimations of current weather conditions; and estimations of current lighting conditions.

Detailed Description Text (291):
FIG. 63 is a schematic representation of an aspect of the invention which involves associating different values with the display of messages at different locations and times and calculating a sum of such values along a space-time path through which one or more vehicles has traveled. Such a calculated sum can be charged to an advertiser based on where and when its messages have been shown by the system or credited to a vehicle operator in return for the locations in which a vehicle owned or operated by that operator has shown messages.

Detailed Description Text (292):
As is shown in FIG. 63, the central system 102B includes a price-location-time database 1272 which includes data indicating a price associated with each of a plurality of locations represented by horizontal distance in the planes 1257, at each of a plurality of times represented by the vertical dimension in FIG. 63. As in FIGS. 61 and 62, the database is shown having a time granularity of one half-hour with a different data plane 1257 being associated with each such half-hour interval. Of course, in other embodiments of the invention other time granularity's could be used, and other ways of representing price as a function of time and place could be used. At each given region within a plane 1257, such as the region

indicated by the circle 1259 in FIG. 63, a plurality of prices or values is associated. This is indicated by the values 1270 shown in the blown up portion of one of the planes 1257 at the lower left-hand corner of FIG. 63. In some embodiments of the invention a different value will be associated with each location in time for the amount of money to be charged to an advertiser and for the amount of money to be paid to vehicle operators or drivers.

Detailed Description Text (293):
As a mobile unit 104 moves through geographic space it radios its location and the identity of the messages it displays to a wireless network, represented by the wireless tower 134 in FIG. 63. The wireless network communicates that information to the central system. This enables the central system to determine a space-time path 1258A through the price-location-time database. A sum of values along such a space-time path, such as the sums represented by the graphs 1274 of 1282 in FIG. 63 can be calculated for each of the paths. The value associated with a given time-location combination in this sum calculation can be multiplied by the number of messages shown in that location, or the amount of time spent displaying messages in that location. In the case of a sum calculated for an advertiser, the advertiser will only be charged for the display of messages which it has agreed to pay for, and not for the display of messages for other advertisers. In most embodiments, the sum calculated for crediting toward a mobile unit operator will give that operator credit for all messages displayed on his vehicle.

Detailed Description Text (327):
In step 1360, the central system uses the viewers-of-type number associated with a shown-message record to calculate the charge to be made to the order's customer as a function of the price associated with exposures to viewers of the current viewer type.

Detailed Description Text (336):
The enclosure, and the components it contains, form a rooftop box 1401. This box is designed to be mounted above a roof protector 1408. The roof protector has a bottom surface 1409, which can be seen in FIG. 68, that is shaped to fit the 3-dimensional shape of the roof of the car on which the rooftop unit is designed to be mounted. The roof protector is designed to spread the weight of the rooftop unit over a relatively large area (at least two square feet and preferably more) of the roof of the vehicle on which it is mounted. Such spreading of the rooftop box's weight is valuable, because the roofs of many vehicles are made of relatively thin sheet metal, which cannot support much weight if that weight is applied to a relatively small area of such sheet metal. This is particularly true if the vehicle is to travel on streets having pot holes and other bumps which will cause the force exerted on the roof by the mass of the rooftop box 1401 at certain moments to be even greater.

Detailed Description Text (365):
The vehicle's electric system includes a battery 1480 connected to ground on one side and to a positive terminal on the other. An ignition switch 1482 has one end connected to the battery's positive terminal and its other end connected to an ignition line 1484. This ignition line is connected to the ignition of the vehicle's engine 1486. When the engine is running it turns a generator 1488, causing the generator to generate electricity that charges the battery 1480 and provides power to circuitry connected to the battery's positive terminal.

Detailed Description Text (404):
In other embodiments of the invention other types of emergency switches can be provided. For example in some embodiments one or more panic buttons would enable a user to separately controlled the generation of emergency messages on its displays and the sending of such emergency messages over its wireless system. In some embodiments the user is provided with controls which allow him or her to indicate the particular time of emergency being experienced, such as whether is a vehicle

breakdown, an accident, a medical emergency, or a crime.

Detailed Description Text (432):
In some of the embodiment of the invention described above the locator signals are transmitted by the same wireless system that is used to receive display-selection messages from the central system. It should be understood that in other embodiments of the invention the locator signals could be transmitted by a separate radio transmitter. For example, in some such embodiments the wireless system used for most data communication between the mobile units and the central system could be a cellular system, whereas the locator signals can be transmitted by separate radio transmitters, which is not part of the cellular system. In some such embodiments, the locator signals transmitted can contain little more information than an identification of the mobile unit itself. In such case, the central system will include additional wireless receivers designed to receive and determine the location of the transmission of such locator signals.

Detailed Description Text (455):
charging a party for the showing of a given message on the given display as a function of said number of people.

Detailed Description Text (456):
In some embodiments of this aspect of the invention, the number of people used to calculate the charge is a number of one or more particular types (i.e. demographic groupings) of people.

Detailed Description Text (457):
In some embodiments of this aspect of the invention, the estimate of the number of one or more particular types of people available to watch a showing of a message includes making such estimate for a display at on a given display at a given time. Such embodiments store for each of a plurality of messages an indication of the amount a party has agreed to pay for having the message shown to a number of one or more particular types of people. Such embodiments select which of said messages to show on a given display at a given location and time as a function of the relative amount of money which can be charged for showing each such message at the given location and time, given the estimate of the number of said one or more particular types of people estimate for the given time and location and the indication of the amounts which have been agreed to be paid for the showing of each message to a number of one or more particular types of people.

CLAIMS:

1. A system for publicly displaying messages comprising: an automotive vehicle and; the following elements carried by the vehicle: a publicly visible display formed by ganging together a plurality of individual digital displays, each having at least a resolution of 640.times.480 pixels; and mobile controller unit for generating signals to cause images to be shown on said ganged display, using vector-based animation representation with different portions of individual images being shown on each of the individual digital displays.

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